

**FINDING OF NO SIGNIFICANT IMPACT
VEHICLE BARRIER
ORGAN PIPE CACTUS NATIONAL MONUMENT
CORONADO NATIONAL MEMORIAL**

The National Park Service (NPS) will construct a 30-mile vehicle barrier adjacent to the international border within Organ Pipe Cactus National Monument, and a 1-mile section in Coronado National Memorial. The purposes of this barrier are (1) to protect the fragile desert environments at both park units from adverse effects caused by illegal smuggling by vehicle across the international border, and (2) to protect the health and safety of visitors and federal employees.

Between 1991 and 2001 over 48,000 pounds of marijuana were seized at Organ Pipe Cactus. In 2001 drug traffic in the monument produced 27 drug cases, with seizures of over 13,000 pounds of marijuana, a 37% increase over 2000 levels. These activities have resulted in substantial degradation of the pristine desert landscape, as well as significant threats to public and employee safety from fleeing drug smugglers. Kris Eggle, a 27-year-old NPS law enforcement ranger at Organ Pipe Cactus, was shot and killed in the line of duty on August 9, 2002, while pursuing drug smugglers fleeing by vehicle from Mexican authorities just north of the border.

The flow of undocumented aliens and drug smugglers has had substantial impacts on the landscape and resources of these two park units. Of particular concern are impacts to threatened or endangered species, such as the cactus ferruginous pygmy-owl and the lesser long-nosed bat. The Sonoran pronghorn, an endangered mammal, occurs at the national monument, and approximately 22–33 individuals remain in the United States. The habitat requirements of the cactus ferruginous pygmy-owl and the Sonoran pronghorn make them especially sensitive to human presence.

Illegal border activity at Organ Pipe Cactus has resulted in the creation of approximately 150 miles of illegal roads. Efforts to close roads with concrete barriers have been ineffective. In recent years, visitors have been subject to numerous threats, robberies, and accidents involving illegal cross-border traffic at Organ Pipe Cactus National Monument. The number of abandoned vehicles left in the monument rose from nearly 0 in 1997 to over 50 in 1998 and to almost 150 in 2001.

PREFERRED ALTERNATIVE

Alternative B, the preferred alternative, proposes the construction of a vehicle barrier along the park units' international boundary with Mexico. Under alternative B a vehicle barrier composed of three styles will be installed along 30 miles of international border at Organ Pipe Cactus National Monument and approximately 1 mile at Coronado National Memorial. The barrier will be placed on the south side of the existing border roads that parallel the boundary. At Organ Pipe Cactus it will extend from the southeastern to the southwestern boundary, and at Coronado it will extend between the southeastern boundary and Smuggler's Wash.

The barrier at both parks will consist of railroad rail cross pieces placed 3 feet high, anchored to upright posts placed every 5 feet. Uprights will alternate between 5 and 6 feet aboveground. The barrier will include an electronic component that will alert monitors to any breach in the barrier. The type of barrier used will depend on the risk of breach in a particular location. The three barrier types proposed include:

- Rail-on-rail — This style uses discrete, individual footings for each upright rail, rather than continuous concrete footing. Rails will be placed as posts in augured holes drilled 5 feet deep, then filled with concrete. No trenching or continuous concrete footers will be constructed.

- Rail-on-concrete-filled post — Steel tubing bollards filled with concrete will be anchored in individual cement footings, similar to the rail-on-rail style. Initial design estimates indicate that it takes approximately 1 hour to cut the rail-on-post barrier, so this type barrier will be used where illegal crossings are highest (such as Lukeville). The barrier will be structurally adequate to resist impacts from a 7,000-pound vehicle hitting the barrier at 40 miles per hour.
- Normandy style — This style is constructed entirely of rail and with no foundation required and will be kept in place by weight. The barrier can be put in place by helicopter, and it will be used where terrain or subsurface conditions make post construction difficult.

Barrier at Organ Pipe Cactus National Monument

At Organ Pipe Cactus National Monument the barrier will consist of approximately 7 miles of railroad rail-on-post barrier, 23 miles of rail-on-rail barrier, and 1 mile of the Normandy barrier. The rail-on-post style will be used in the Lukeville area of Organ Pipe Cactus near the port of entry, where the vast majority of illegal crossings occur. The Normandy barrier will be placed by helicopter in the monument's wilderness area (which will comprise approximately 0.25 mile) in order to prevent the possibility of vehicles driving around Sonoyta Hill to reach Hwy 85. This area is a strategic topographic point that isolates a large portion of the park (which is the most heavily visited and includes the campground and visitor center) from potential encounters with vehicles.

The dirt road adjacent to the boundary fence will be widened from 12 feet to 20 feet. The vehicle barrier will occupy a 3-foot strip adjacent to the existing boundary except in the 0.75-1 mile stretch of land in the mesquite bosque east of Dos Lomitas Ranch. Because the Mexican road that parallels the border has been lowered, the barrier will be moved 10 to 15 feet north so that it will be protected from bank erosion. The patrol road that parallels the boundary will be widened to 30 feet in some areas to accommodate passing vehicles. These passing areas or turnaround sites will be located mostly on areas with low-density vegetation or devegetated, degraded sites.

During construction a total of 35 sites will be cleared and used as staging areas (materials storage) and turnaround sites for large vehicles. Eight of these sites have been impacted severely by border activities and are devegetated or nearly so. The existing condition of the remaining 28 sites ranges from poor to pristine. The staging areas will extend approximately 30 feet beyond the primary 30-foot-wide disturbance area and will vary in length from approximately 100 to 250 feet. A total of 14 connecting roads will be used to access the border from South Puerto Blanco Drive. Previously disturbed areas will be used wherever possible. No wilderness areas will be affected on the south side of the South Puerto Blanco Road and a 150-foot-wide non-wilderness corridor exists on the north side of the road.

The proposed foundation depths on the barrier uprights will be a minimum of 5 feet in order to avoid any potential for scour associated with even fairly large storm events (15 inches of scour for a 100-year event). Therefore, no additional scour protection is proposed. No structures will be placed in washes other than the barrier itself.

All uprights will be anchored in holes drilled 5 feet deep (or 8 feet in washes), then filled with concrete to 2 inches above the ground, where the concrete will slope away from the steel pipe in order to shed water.

In some areas of Organ Pipe Cactus National Monument, a barbed-wire livestock fence will remain in place, approximately 2 feet south of the new vehicle barrier. In other areas, the existing fence will be removed. In areas where livestock are present in Mexico, one strand of barbed wire may be placed above the barrier's horizontal rail, and one strand of smooth wire will be placed no less than 18 inches above the ground, below the horizontal rail. This will be done to prevent illegal grazing in the monument, while allowing wildlife to cross.

Barrier at Coronado National Memorial

Coronado's barrier will be located in the southeastern corner of the park, along a corridor approximately 20 feet wide and extending 0.5 mile west from the east boundary of the park along the present border road. The barrier will continue northwest along the same dirt road for another 0.45 mile, for a total length of 0.95 mile. The section along the border road will consist of upright railroad rails and a horizontal cross piece (rail-on-rail). The northwestern section of the barrier (along the north-south access road) will consist only of concrete-filled steel posts with no horizontal cross piece. The existing barbed wire boundary fence will remain.

The primary staging area will be located outside the park in a previously disturbed area immediately adjacent to the southeast corner of the park. The project will result in a net increase of disturbed ground less than 1.0 mile long and 11 feet wide, plus 2 turnaround areas.

Coronado's construction site will be accessed primarily from the east by way of existing public dirt roads and by way of the improved border road east of the memorial. Smaller vehicles could also access the construction site on E. Forest Lane; however, no improvements will be made to that road. Construction materials will be stored at Montezuma Ranch, a disturbed area recently acquired by the National Park Service. Staging will occur primarily east of the park along the border road (outside the memorial's boundaries). A large (66-foot diameter) disturbed area immediately outside the park's southeast corner, which was used during a previous border improvement project, could be used for staging.

Mitigating Measures Included in Alternative B

The area of disturbance at Organ Pipe Cactus National Monument will be approximately 30 feet wide and 30 miles long, for a total of approximately 109 acres. Of that area, approximately 43.6 acres have already been disturbed, in the form of a 12-foot-wide boundary road within the 60-foot boundary easement.

- The proposed barrier design will be wildlife friendly. The horizontal rails will be placed 36 inches above the ground, which is higher than the lowest wire on most wildlife friendly livestock fences, which are typically 16 to 22 inches above the ground. In cases where a livestock fence is used in addition to the vehicle barrier, a smooth wire will be placed no less than 18 inches above the ground, below the horizontal rail.
- Construction activity will occur in the existing border easement that parallels the international boundary at each park unit. The roads are approximately 15-20 feet wide and may be widened to accommodate construction activities. However, widening will not exceed 30 feet, thus construction activities will remain within the 60-foot easement defined for patrol and protection purposes. No road construction will occur in wilderness areas of Organ Pipe Cactus National Monument.
- Staging areas for construction supplies and equipment will be limited to the smallest extent possible to avoid disturbance of vegetation, wildlife, threatened or endangered species, and cultural resources. Previously disturbed sites will be used as much as possible. No staging areas will occur in known Sonoran night-blooming cactus (*Penioceris striatus*) locations.
- A revegetation plan will address all areas that will be disturbed by construction activities at both park units, such as staging areas and the width of denuded area. Removal or damage to existing plants will be avoided as much as possible. A revegetation plan will be developed to address reseeding in disturbed areas in order to reduce erosion.
- A road maintenance plan for both parks will be developed to address equipment needs, amount and location of water for dust abatement, feasibility of dust abatement treatments

other than water, and stabilization treatments for soft areas. This plan will also address methods for reducing erosion and construction activities in washes and culverts.

- Security will be provided to protect construction materials from theft and vandalism during construction. A security plan will be developed to define required security measures, which will be adhered to during construction.
- The disturbed and restored areas will be continually monitored to eradicate invasive plants along the border if they colonize as a result of construction.
- No excavation would occur within 10 feet of the permanent IBWC monuments in order to prevent undermining or damage to the foundations, and to allow room for future maintenance activities where terrain allows. In cases where terrain does not allow the full 10 foot setback, a minimum of five feet will be maintained around the monuments. Potential cumulative affects of this and future projects along the border will be considered in any needed future compliance documentation.
- The new steel vehicle barrier will be allowed to rust naturally and would not be painted. This treatment will minimize the visual contrast with surrounding soil and vegetation and will minimize reflectivity. The color and texture contrast between the weathered iron and concrete historic boundary monuments and the new steel vehicle barrier will result in visual contrast between these two elements. This visual contrast will not be adverse because it will distinguish between historic and newly added elements.

Mitigating Measures Specific to Organ Pipe Cactus National Monument

Sections of the dirt road parallel to the border east of Lukeville in Mexico have undercut the existing fence. In these areas, the barrier will be offset from the border an additional 2 to 3 feet north and posts will be set 10 feet deep in order to prevent the barrier from collapsing and to mitigate the appeal of tunneling under it from the low road in Mexico.

Two existing roads will be used to access the construction area from South Puerto Blanco Drive, west of Highway 85.

The Quitobaquito Springs and Pond will be avoided. Activities planned under this alternative will remain strictly within the designated operation zone, which is outside the Quitobaquito area. However, because of Quitobaquito's close proximity to the border and sensitive habitat, the following mitigation measures will be followed to further protect this area:

- No staging or storage of materials, vehicles, or fuel will be permitted within 500 feet of Quitobaquito (e.g., no cement mixing, washing or refueling of equipment) in order to prevent chemical contamination and miscellaneous anthropogenic impacts.
- All construction activities, impacts, and equipment will occur no closer than 200 feet from the southern edge of the pond.
- Dust abatement measures will be applied within 0.5 mile of Quitobaquito, using non-toxic, neutral sources (e.g., water).
- No water will be taken from the Quitobaquito system for any project-related purposes.
- To prevent hydrological disturbance, no blasting will occur within 2 miles of Quitobaquito. Prior to drilling holes for uprights, a geohydrologist familiar with the published research on Quitobaquito geohydrology will evaluate the project design and methods to determine if drilling could affect subsurface hydrology.
- A fully equipped fire suppression crew will be present during construction activities at Quitobaquito. A no-smoking area will be defined within 500 feet of Quitobaquito.
- All vegetation removed for construction purposes will be immediately taken away from the area in order to reduce the threat of fire.

- The restoration approach for Pleistocene Epoch terraces will be defined in a vegetation management plan.
- Aguajita Springs is an ephemeral stream and will be avoided. Activities planned under this alternative will remain strictly within the designated operation zone, which is outside Aguajita Springs. However, because of the springs' proximity to the border and sensitive habitat, the following mitigation measures will be followed to further protect this area:
- No grading will occur in the stream corridor; the existing stream channel will remain the original size and form.
- The construction corridor will be no more than 15 feet wide through the riparian area.
- The established boundary limits will be marked by flagging or orange plastic fencing.
- No fueling or storage of fuels or other contaminants will occur in the area.

To ensure that no impacts will occur to archeological resources, the following measures will be taken:

- If concealed archeological resources are encountered during project activities, all necessary steps will be taken to protect them and to notify the park consulting archeologist.
- Where recorded cultural resources are adjacent to the existing fence line road, construction activities will not exceed the current width of the road.
- Archeological sites in areas of possible impact due to road widening or construction will be flagged.
- An archeologist will monitor all construction activities in the vicinity of the archeological sites to ensure that archeological sites are avoided.
- An archeologist will monitor activities related to the construction of the Normandy barrier and the two access roads.

Mitigation Specific to Coronado National Memorial

Two agave monitoring plots and one small mammal monitoring plot have been established by NPS staff near the border. Proposed construction activities will occur outside these areas; therefore, these plots will not require relocation.

ALTERNATIVES CONSIDERED

The alternatives presented in this document are the result of agency and public scoping input, and their impacts are analyzed in accordance with the National Environmental Policy Act. All alternatives must be consistent with the purpose and significance of Organ Pipe Cactus National Monument and Coronado National Memorial, and they must meet the purpose of and need for action, as well as the objectives for the project. Six alternatives, including the no-action alternative, were originally considered, four of which were dismissed for various reasons.

The environmental assessment evaluated two alternatives: the preferred alternative (Alternative B) described above, and the no-action alternative (Alternative A). Under alternative A, no-action alternative, no additional action will be taken to prevent vehicles from illegally entering the park units from Mexico. The no-action alternative is the baseline for analyzing the impacts of the alternatives.

Alternative B, the preferred alternative, proposes the construction of a vehicle barrier along the park units' international boundary with Mexico.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that " [t]he environmentally preferable

alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on the analysis prepared in this environmental assessment, alternative B is considered the environmentally preferred alternative.

The no-action alternative, which will continue existing methods to prevent illegal vehicular use of the park units, will not satisfy the first four requirements detailed above. As illegal vehicular use of the park units' continued, the biological and physical environment will continue to be degraded by impacts to wildlife, threatened or endangered species, plant species, and soils, thus diminishing the quality of the environment for future generations. Illegal roads are being created in the park at a rate of approximately 50 miles per year (based on activity over the last three years). In addition, illegal drug smuggling through the park units, which is more effective in a vehicle, does not ensure a safe, healthful, or productive environment, as exemplified by the recent death of the Organ Pipe Cactus park ranger. The impacts of vehicular use on the backcountry also degrade the aesthetically and culturally pleasing aspects of the surroundings and results in degradation, risk of health or safety, or other undesirable and unintended consequences. Illegal vehicles are also used at Organ Pipe Cactus to transport wood from historic structures into Mexico to be used for firewood, causing degradation of important historic and cultural aspects of our national heritage.

The no-action alternative will also impede achieving a balance between population and resource use because people have expressed reluctance to visit Organ Pipe Cactus National Monument due to fear for personal safety. A wide sharing of life's amenities is diminished if people are afraid to visit the parks.

The no-action alternative will not impact the quality of renewable resources or inhibit the attainable recycling of depletable resources.

In contrast to the no-action alternative, alternative B will satisfy the majority of the six requirements listed above. Constructing a vehicle barrier at the park units will help preserve the biological and physical environment (including wildlife, threatened or endangered species, plant species, and soils) for future generations by impeding illegal traffic through the backcountry. The amount of illegal drug smuggling will be reduced, helping to ensure a safe, healthful, and productive environment for park visitors and employees. A vehicle barrier will also help promote the aesthetically and culturally pleasing aspects of the surroundings, while reducing the amount of degradation, risk of health or safety, or other undesirable and unintended consequences. Historic structures at Organ Pipe Cactus National Monument will be better preserved because illegal vehicles will no longer be used to transport wood from these structures into Mexico for firewood. A vehicle barrier will help maintain the integrity of important historic and cultural aspects of our national heritage.

The existence of a vehicle barrier and the resultant decrease in drug smuggling could decrease the public's perceived risk of visiting the park units, perhaps resulting in increased visitation. This will help achieve a balance between population and resource use, permitting a "wide sharing of life's amenities."

As under the no-action alternative, alternative B will not impact the quality of renewable resources or inhibit the attainable recycling of depletable resources.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse: The preferred alternative will have no impact on air quality; soundscapes; water quality; wetlands; wilderness; cultural resources (including archeological resources, historic structures and buildings, cultural landscapes, and ethnographic resources); prime and unique farmlands; Indian trust resources; socioeconomic impacts; environmental justice; or adjacent lands (Coronado only).

Organ Pipe Cactus National Monument

Impacts to soils will be beneficial, long-term and negligible. Impacts to wildlife and wildlife habitat, as well as threatened and endangered species, will be beneficial, long-term, and minor to moderate. Impacts to vegetation, human health and safety, and park management and operations will be beneficial, long-term, and moderate. Impacts to visitor experience, use, and appreciation will be beneficial, long-term, and minor to moderate; however, impacts to viewscales will be adverse, long-term, and negligible. There will be adverse, long-term, minor to moderate impacts on floodplains and adjacent lands.

Adverse, short-term impacts to soils; vegetation; wildlife and wildlife habitat; threatened and endangered species; and visitor experience, use, and appreciation will occur due to construction activities. These impacts will be negligible to minor (for threatened and endangered species), moderate (for soils), and minor for all others. Mitigation will minimize the amount of short-term, construction-related impacts.

Coronado National Memorial

Impacts to vegetation will be beneficial, long-term, and negligible to minor. Impacts to wildlife and wildlife habitat, threatened and endangered species, human health and safety, and park management and operations will be beneficial, long-term, and minor. Impacts to visitor experience, use, and appreciation will also be beneficial, long-term, and minor; however, impacts to viewscales will be adverse, long-term, and negligible. There will be adverse, long-term, negligible impacts to soils, and adverse, long-term, minor to moderate impacts on floodplains.

Adverse, short-term impacts to soils; vegetation; wildlife and wildlife habitat; threatened and endangered species; and visitor experience, use, and appreciation will occur due to construction activities. These impacts will be negligible to minor (for threatened and endangered species), moderate (for soils), and negligible for all others. Mitigation will minimize the amount of short-term, construction-related impacts.

Degree of effect on public health or safety: Installing a vehicle barrier will help reduce the amount of illegal vehicles entering the park from Mexico. In the Lukeville area the barrier will consist of steel tubing bollards filled with concrete, which will be anchored in cement footings. Initial design estimates indicate that it takes approximately 1 hour to cut the rail-on-post barrier. The barrier will be structurally adequate to resist impacts from a 7,000-pound vehicle hitting the barrier at 40 miles per hour. The following mitigation will further minimize effects to public health and safety:

- A road maintenance plan for both parks will address equipment needs, amount and location of water for dust abatement, feasibility of dust abatement treatments other than water, and stabilization treatments for soft areas. This plan will also address methods for reducing erosion and construction activities in washes and culverts.

- A security plan will be developed to define required security measures, which will be adhered to during construction.
- A fully equipped fire suppression crew will be present during construction activities at Quitobaquito. A no-smoking area will be defined within 500 feet of Quitobaquito.
- All vegetation removed for construction purposes will be immediately taken away from the area in order to reduce the threat of fire at Quitobaquito.
- No fueling or storage of fuels or other contaminants will occur in the area of Quitobaquito.

Drug smugglers could continue to devise methods for defeating the vehicle barrier, particularly in areas where it will be easier to breach. The vehicle barrier will provide beneficial, short- and long-term, moderate impacts unless drug smugglers devised methods to breach the barrier, which could reduce long-term benefits.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas: As described in the environmental assessment, cultural resources (including archeological resources, historic structures and buildings, cultural landscapes, and ethnographic resources); prime and unique farmlands; Indian trust resources; adjacent lands (Coronado only); prime farmlands; wetlands; and wilderness will not be affected.

Degree to which effects on the quality of the human environment are likely to be highly controversial: There were no highly controversial effects identified during either preparation of the environmental assessment or the public review period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks: There were no highly uncertain, unique or unknown risks identified during either preparation of the environmental assessment or the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: The preferred alternative neither establishes a National Park Service precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: Impacts of the preferred alternative identified in the environmental assessment were to floodplains; soils; vegetation; wildlife and wildlife habitat; threatened and endangered species; visitor experience, use, and appreciation; human health and safety; park management and operations; and adjacent lands (Organ Pipe Cactus Only). As described in the environmental assessment, ongoing and foreseeable future actions include previous and current travel along the patrol roads that border the park units, as well as future plans proposed by the U.S. Border Patrol.

Organ Pipe Cactus National Monument

Plans that could affect Organ Pipe Cactus National Monument include the following:

- Installation of a pedestrian barrier from the port of entry extending 1 mile to the east and west, possibly extending the barrier to 2 miles on each side.
- Replacement of the temporary checkpoint facility on Arizona Highway 85 — The new facility could be within the monument or north of the park on BLM land. It will include pull-outs and possibly lighting to increase safety.

- Installation of 12-foot-square concrete pads for the placement of remote camera towers. Nine potential sites have been identified within Organ Pipe Cactus NM-
- Replacement of the existing border road that parallels the international boundary within the 60-foot easement with an all-weather road — The replacement will include bridges, culverts, and small pipes for drainage (if necessary).

Because of the North American Free Trade Agreement, the Lukeville port-of-entry may open 24-hours a day. Therefore, traffic will constantly flow through the monument on Arizona 85, and rangers will be staffed 24-hours a day. The port-of-entry is currently open daily 6:00 A.M. to midnight (it is not known when the hours may change.)

These impacts will be primarily beneficial, with the exception of floodplains and adjacent lands (Organ Pipe Cactus only). The beneficial, negligible to moderate impacts of the preferred alternative, in conjunction with the beneficial impacts of other ongoing and foreseeable future actions, will cumulatively add a beneficial, negligible to moderate amount of long-term impacts to soils; vegetation; wildlife and wildlife habitat; threatened and endangered species; visitor experience, use, and appreciation; human health and safety; and park management and operations. The adverse, minor to moderate, long-term impacts of the preferred alternative, in conjunction with the adverse impacts of other ongoing and foreseeable actions, will cumulatively add an adverse, negligible to minor amount of long-term impacts to floodplains and adjacent lands.

Coronado National Memorial

Plans that could affect Coronado National Memorial include the following:

- Continued access by law enforcement staff on East Forest Lane to the border in the southeastern portion of the memorial.
- Installation of an all-weather road along the border (see Organ Pipe Cactus above). USBP employees do not currently patrol the park on a regularly scheduled basis.
- Installation of a camera tower at Montezuma Ranch; the tower will be permanent and monitored in Naco. The camera will be located approximately 0.5 mile from the border in a previously disturbed area. The Border Patrol plans to install the camera between April and July 2003. The original plan specified an 80-foot tower; the National Park Service has asked for a 60-foot tower instead.

These impacts will be primarily beneficial, with the exception of floodplains. The beneficial, negligible to minor impacts of the preferred alternative, in conjunction with the beneficial impacts of other ongoing and foreseeable future actions, will cumulatively add a beneficial, negligible to minor amount of long-term impacts to soils; vegetation; wildlife and wildlife habitat; threatened and endangered species; visitor experience, use, and appreciation; human health and safety; and park management and operations. The adverse, negligible to moderate, long-term impacts of the preferred alternative, in conjunction with the adverse impacts of other ongoing and foreseeable actions, will cumulatively add an adverse, negligible to minor amount of long-term impacts to floodplains and soils.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

Archeological Resources — Organ Pipe Cactus National Monument

The Western Archeological and Conservation Center surveyed the project area for archeological resources during December 2002. Several sites containing artifact scatters were discovered in the

project area. None of the sites will be either directly or indirectly impacted by the preferred alternative. However, the AZ State Historic Preservation Office has suggested mitigation measures, listed in the environmental assessment, to help prevent disturbance of unknown archeological sites. Provided that these measures are met, the determination of no historic properties affected was made.

Archeological Resources — Coronado National Memorial

The Western Archeological and Conservation Center surveyed the project area for archeological resources during December 2002. No archeological resources were found in the project area.

Historic Structures and Buildings, and Cultural Landscapes — Organ Pipe Cactus National Monument

Quitobaquito Springs is a cultural landscape that reflects a sequence of human occupations with a rich ethnic history of various groups interacting with natural features from prehistoric times to the present. Quitobaquito Springs was formally determined eligible for listing on the National Register of Historic Places on August 18, 1994.

The Dos Lomitas Ranch is an adobe ranch house near the project area that is regarded as a rare example of a Sonoran, Mexican-built ranch house. The National Park Service will place temporary construction fencing around the ranch during construction to minimize any effect on the cultural resources. Dos Lomitas Ranch was listed on the National Register of Historic Structures on May 6, 1994, as both a historic structure and a cultural landscape.

The Gachado Well and Line Camp was among the first efforts to raise cattle in what is now the national monument. The Gachado Well and Line Camp were listed on the National Register of Historic Places on November 2, 1978, as both a historic structure and a cultural landscape.

Nine international boundary markers are included in the project area; each is eligible for listing on the National Register of Historic Places. To prevent any undermining or damage to the foundations of the barriers, the AZ State Historic Preservation Office and the NPS have agreed to additional mitigation measures to minimize harm. Please see the errata sheets for amendment to the EA regarding these measures.

Historic Structures and Buildings, and Cultural Landscapes — Coronado National Memorial

Three international boundary markers exist within Coronado National Memorial. The closest marker to the project area is approximately 1.5 miles west of the western end of the proposed barrier; therefore, no direct impacts will result from the proposed action.

A cultural landscape inventory was completed for Montezuma Ranch at Coronado National Memorial in 1999. The ranch has severe integrity problems and is not eligible for listing on the national register as a historic landscape. The entire memorial viewshed is scheduled for inventory after 2005 (impacts to viewsapes were addressed under the "Visitor Use, Understanding, and Appreciation" impact topic). Aside from important viewsapes, no cultural landscapes exist at Coronado National Memorial that will be impacted by any of the alternatives proposed for this project.

The integrity of the present cultural landscapes at either park unit will not be affected by any of the alternatives described in the environmental assessment.

Ethnographic Resources — Organ Pipe Cactus National Monument

Quitobaquito Well is a large open pond that has been an attraction to humans and wildlife for centuries. O'odham people regard water from the springs at Quitobaquito as sacred and retrieve

water when needed. American Indian tribes traditionally associated with the lands of Organ Pipe Cactus National Monument and others with whom monument staff regularly consult were apprised of the action, and a site visit was conducted on February 7, 2003.

A cultural resource specialist will monitor the site during construction, and construction area limits will be flagged to ensure that Quitobaquito Well and Springs will not be affected by construction.

Ethnographic Resources — Coronado National Memorial

No ethnographic resources have been identified at Coronado National Monument.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

Organ Pipe Cactus National Monument

The biological assessment of threatened, endangered, candidate species, and species of special concern describes species accounts of the Quitobaquito pupfish (*Cyprinodon eremus*), lesser long-nosed bat (*Leptonycteris curasoae*), Sonoran pronghorn (*Antilocapra americana sonoriensis*), and cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*). The biological assessment was submitted to the USFWS on March 12, 2003. A representative of the USFWS met with NPS staff on April 29, 2003 for a field visit and meeting regarding the design of the barrier along the border, including the area surrounding Quitobaquito Springs. Also discussed was the ecology of the listed species considered, and possible impacts. Subsequent to that meeting, the USFWS requested that the NPS clarify their determinations of effect, and because there may be short-term negative impacts on each species, the USFWS would likely not concur with a determination of *not likely to adversely affect* based on an overall beneficial effect. In response, the NPS presented the following determinations to the USFWS in their June 17, 2003 letter:

The USFWS responded to the NPS request for formal consultation on May 30, 2003. The NPS simplified the effects determination for several species, to avoid presenting multiple determinations.

It was stressed, however, that while the project may have adverse effects on some species, the project is being undertaken specifically to achieve beneficial effects (both immediate and long-term) for all listed species, other natural and cultural resources, and public safety. The following determinations were reaffirmed/clarified (note: during formal consultation between the NPS and the USFWS, the determination of effect for the Sonoran pronghorn was changed):

Quitobaquito pupfish (*Cyprinodon eremus*)

May affect, not likely to adversely affect

May affect, not likely to adversely affect critical habitat

Lesser long-nosed bat (*Leptonycteris curasoae*)

May affect, likely to adversely affect

Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)

May affect, likely to adversely affect

May affect, likely to adversely affect, proposed critical habitat

Sonoran pronghorn (*Antilocapra Americana sonoriensis*)

May affect, likely to adversely affect

Quitobaquito Pupfish

To avoid general impacts to the pupfish, all construction activities, impacts, and equipment will be kept strictly within 30 feet of the international border. This will keep activities approximately 200 feet (61 m) from the southern edge of the pond.

- No water will be taken from the Quitobaquito system for any project-related purpose.
- To prevent hydrological disturbance, no blasting will take place within 2 miles of Quitobaquito. Prior to drilling holes for upright supports, a geohydrologist familiar with the published research on Quitobaquito geohydrology, will evaluate the project design and methods, to determine whether there is a risk that drilling the project bore holes may affect the subsurface hydrology.
- To prevent chemical contamination and miscellaneous anthropogenic impacts, no project staging will take place at Quitobaquito, e.g. no cement mixing, washing or refueling equipment, etc. Also, there will be no storage of materials, vehicles, or fuel within 500 feet (152 m) of Quitobaquito.
- Dust abatement measures will be used within 0.5 mile (800 m) of Quitobaquito, using non-toxic, neutral means (e.g., water).
- To prevent danger of wildfire, project workers will observe a "no smoking" area within 500 feet (152) of Quitobaquito. A fire suppression crew will be present, fully equipped, during the time that construction passes through the Quitobaquito area. Also, all vegetation that is cut to make room for construction will be removed from the area immediately and in its entirety. It will be salvaged as firewood, taken to the Organ Pipe Cactus NM brush dump, or otherwise removed from the project area.

By observing the precautions described above, potential adverse impacts on the Quitobaquito pupfish will be avoided. Beneficial effects should result from the proposed project in the form of improving site security, reducing the potential for wildfire to spread from Mexico. It is the judgment of the National Park Service that these beneficial effects will greatly outweigh the potential adverse effects described above. No adverse modification of designated critical habitat will take place.

The USFWS concurred with the determination of *may affect, not likely to adversely affect* in a letter dated July 24, 2003. The NPS will implement specific actions recommended by the NPS in its biological assessment. There were no additional recommendations in the USFWS Biological Opinion.

Sonoran Pronghorn

The NPS, in a June 17, 2003 memo to the USFWS, revised their determination for the S. pronghorn from *May affect, not likely to adversely affect* to *May affect, likely to adversely affect*. Please see the errata sheets for USFWS conservation recommendations.

The USFWS concurred with this determination in a letter dated July 24, 2003. The NPS will implement specific actions recommended by the NPS in its biological assessment, and by the USFWS in its biological opinion.

Lesser Long-Nosed Bat

The proposed project may adverse effects on the lesser long-nosed bat, through removal of food plants and facilitating invasion by non-native plants. However, the proposed project is likely to beneficially affect the lesser long-nosed bat, by preventing or greatly reducing impacts on foodplants caused by illegal off-road driving, and allowing recovery of habitat already impacted. It

is the judgement of the National Park Service that these beneficial effects are likely to outweigh the adverse effects.

The USFWS concurred with the determination of *may affect, likely to adversely affect* in a letter dated July 24, 2003. The NPS will implement specific actions recommended by the NPS in its biological assessment, and by the USFWS in its biological opinion.

Cactus Ferruginous Pygmy Owl

The proposed project may adversely affect the cactus ferruginous pygmy-owl, by destruction of up to 12.23 ha (30.20 ac) of habitat that is of "Moderate" to "High" quality. This habitat is distributed discontinuously along a strip approximately 30 miles (48.4 km) in length. Only two small areas (less than 1 km/ 0.62 mi) of this habitat have been surveyed. No pygmy-owls were detected.

The proposed project will adversely modify up to 12.576 ha (31.058 ac) of proposed pygmy-owl critical habitat. However, by our habitat assessment, only 4.404 ha (10.876 ac) of that area is of moderate to high quality, where the primary constituent elements of pygmy-owl critical habitat are present. The proposed project is also likely to beneficially affect the pygmy-owl, by 1) preventing or greatly reducing habitat destruction; 2) preventing or greatly reducing disturbance of resident birds; 3) allowing restoration to begin, in areas already impacted by off-road driving. It is the judgment of the National Park Service that these beneficial effects will outweigh the adverse effects described above.

The USFWS concurred with the determination of *may affect, likely to adversely affect* in a letter dated July 24, 2003. The NPS will implement specific actions recommended by the NPS in its biological assessment, and the USFWS in its biological opinion.

Coronado National Memorial

The biological evaluation of threatened, endangered, candidate species, and species of special concern describes species accounts of the lesser long-nosed bat (*Leptonycteris curasoae*) and Mexican spotted owl (*Strix occidentalis lucida*).

Lesser Long-Nosed Bat

The proposed project may adversely affect the lesser long-nosed bat through removal of food plants; however, by transplanting at least half of the agaves in the project area the proposed action should not adversely affect this species. The proposed project is also likely to beneficially affect the lesser long-nosed bat by preventing or greatly reducing impacts on food plants caused by illegal off-road driving. It is the opinion of the National Park Service that these beneficial effects are likely to outweigh the adverse effects described above.

The USFWS concurred with the determination of *may affect, likely to adversely affect* in a letter dated July 24, 2003. The NPS will implement specific actions recommended by the NPS in the biological assessment, and the USFWS in its biological opinion.

Whether the action threatens a violation of federal, state, or local environmental protection law: The preferred alternative violates no federal, state, or local environmental protection laws.

In addition to reviewing the list of significance criteria, the National Park Service has determined that implementation of the proposal will not constitute an impairment to Organ Pipe Cactus National Monument's and Coronado National Memorial's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the environmental

assessment, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies (December 27, 2000). Although the plan/project has some negative impacts, in all cases these adverse impacts are the result of actions taken to preserve and restore other park resources and values. Overall, the plan results in benefits to park resources and values, opportunities for their enjoyment, and it does not result in their impairment.

PUBLIC INVOLVEMENT

A public scoping letter dated November 18, 2002, was mailed to interested and affected parties on the mailing lists of both park units. On Sunday, December 8, 2002, the *Arizona Daily Star* printed an article about the "Park Service planning steel barriers at the border." On Sunday, December 8, the *Sierra Vista Herald* also printed an article about the proposed vehicle barrier at Coronado. On Wednesday, November 27, 2002, the *Ajo Copper News* printed a story about the proposed vehicle barrier at Organ Pipe and Coronado. All articles listed a postal and e-mail address through which the public could respond. On Tuesday, December 10, *USA Today* also included a short description of the proposal under "Arizona" in its national news briefs.

A total of 81 public comments were received. Comments by the public were carefully considered and addressed in the environmental assessment.

The environmental assessment was made available for public review and comment during a 52-day period ending June 16, 2003. A total of 17 responses were received. A majority of comment letters included support for the preferred alternative. Responses to substantive comments are included in the errata sheets.

CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are negligible to moderate. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved:

Karen Wade
Director, Intermountain Region

Date

Errata Sheets
Environmental Assessment
Organ Pipe Cactus National Monument
Coronado National Memorial

Page 30, Mitigating Measures Included in Alternative B, replace bullet #8

- ~~• No excavation would occur within 10 feet of the permanent IBWC monuments in order to prevent undermining or damage to the foundations, and to allow room for future maintenance activities. Vehicle barriers would be placed around the monuments in order to accommodate the 10-foot distance.~~

with

- No excavation would occur within 10 feet of the permanent IBWC monuments in order to prevent undermining or damage to the foundations, and to allow room for future maintenance activities **where terrain allows. In cases where terrain does not allow the full 10 foot setback, a minimum of five feet will be maintained around the monuments..** Potential cumulative affects of this and future projects along the border will be considered in any needed future compliance documentation.

Page 30, Mitigating Measures Included in Alternative B, replace bullet #9

- ~~• The vehicle barrier would be allowed to rust naturally and would not be painted~~

with

- The new steel vehicle barrier will be allowed to rust naturally and would not be painted. This treatment will minimize the visual contrast with surrounding soil and vegetation and will minimize reflectivity. The color and texture contrast between the weathered iron and concrete historic boundary monuments and the new steel vehicle barrier will result in visual contrast between these two elements. This visual contrast will not be adverse because it will distinguish between historic and newly added elements.

Page 31, Mitigating Measures Specific to Organ Pipe Cactus National Monument, add the following bullets:

Mitigation measures to lessen potential impacts to the Sonoran pronghorn:

- In addition to rehabilitation of some of the areas disturbed by the action (please refer to the biological assessment), rehabilitate areas that have been impacted by the illegal traffic (including using some of the transplanted cactus).
- Continue to fund and support basic research, inventory, and monitoring of the Sonoran pronghorn. NPS should fund or staff recovery projects.

Mitigation measures to lessen potential impacts to the Lesser Long-nosed bat:

- Monitor the effects of undocumented immigrants on lesser long-nosed bat roosts and foraging habitat; implement measures to protect roosts as necessary.

- Continue the control of non-native plants that may alter fire frequencies and intensities on the Monument and assist other agencies in developing methods for controlling these species.
- Implement the lesser long-nosed bat recovery plan, as appropriate.
- ~~Hire a full-time recovery projects coordinator for listed species at Organ Pipe Cactus NM. This coordinator could seek funding and facilitate implementation of proposed conservation measures for the lesser long-nosed bat, pygmy owl, and other species; and serve as the Monument's contact for cooperative projects and coordination throughout the ranges of listed species occurring at the Monument.~~

Mitigation measures to lessen potential impacts to the Cactus ferruginous pygmy-owl:

- NPS will salvage some vegetation and collect seed, and rehabilitate most staging areas and access roads not being permanently maintained for barrier access (National Park Service 2003). NPS will salvage all saguaro, senita and organ pipe cactus up to 1 meter (about 3 feet) tall. NPS will attempt to salvage saguaros up to six feet tall. NPS estimates that 400-600 cacti will be salvaged.
- NPS will survey for and control invasive plants in the project area. Construction in areas of suitable pygmy-owl habitat (e.g., between Lukeville and Monument Hill) will take place outside the breeding season (February 1 to July 31).
- If activities may occur in high and moderate quality habitat during the breeding season (February 1 to July 31), NPS will conduct surveys in, and within 400 meters of, high and moderate quality habitat in the project area of those Phases.

NPS will complete "one-year" pygmy-owl surveys during the survey season of 2004 (January 1 to June 30). NPS will conduct a total of six visits, with four of these visits conducted between February 15 to May 15. The visits will be spaced at least 15 days apart.

NPS will complete the two-year survey protocol for project clearance as presented in "Cactus Ferruginous Pygmy-owl Survey Protocol", January 2000.

- If owls are detected either through surveys or incidentally in or near the project area, activities will not occur within 400 meters of the nesting area (if it can be determined) or detection site during the breeding season.
- NPS and the USFWS will coordinate in determining if some areas of suitable habitat may be impacted during the breeding season without surveys depending on the existing level of disturbance that may already be occurring in specific areas.
- NPS will conduct maintenance activities outside the breeding season (February 1 to July 31) in suitable habitat. If this is not possible because of law enforcement requirements, then maintenance activities during the breeding season in suitable habitat will be conducted from three hours after sunrise to two hours before sunset to avoid the most active times for pygmy-owls. If any new owl territories are established during project implementation or the maintenance period, NPS will contact USFWS to discuss how to minimize or eliminate adverse impacts while still conducting necessary maintenance.
- NPS will use its authorities to implement, as funding permits, a new program specifically to develop inventory and monitoring information on Organ Pipe Cactus NM about the pygmy-owl.

- NPS will mutually develop with U.S. Border Patrol (Border Patrol) a comprehensive plan to manage human activity in backcountry areas associated with illegal traffic and associated law enforcement activities. The plan will include management actions specific to all listed species that occur on Organ Pipe Cactus NM, and will contain measures that specifically address minimization of noise and human activities near pygmy-owl nest sites and known areas of pygmy-owl occurrence such as the Armenta Southeast, Boundary Site, Kuakatch, Growler, and Arch survey areas. The plan will be developed as soon as feasible, provided cooperation from Border Patrol on the plan can be obtained. Once completed, NPS will provide USFWS a copy of the plan, and will continue ongoing dialogs with the Border Patrol on both resource management and law enforcement issues and sharing of information. NPS will continue to provide Border Patrol agents with training on resource management policies and protection, including those relevant to threatened and endangered species. NPS will continue to monitor, document, and mitigate the impacts of undocumented aliens and smugglers on the natural resources of the Monument.
- ~~NPS will use its authorities to acquire and add to the Monument the section of state lands containing Growler Canyon (R7W, T14S, Section 36, Bates Well Quad).~~
- In addition to rehabilitation of some of the areas disturbed by the action, NPS will rehabilitate areas that have been impacted by the illegal traffic (including using some of the transplanted cactus).

Page 51, Methodology for Assessing Impacts – add the following cumulative effects as actions that could affect threatened and endangered species:

- *Residential and Commercial Development* - Communities in the United States and Mexico continue to grow and occupy some areas containing suitable habitat for wildlife species. Ongoing residential and commercial development will continue to displace wildlife habitat, including threatened and endangered species, from their habitat.
- *Farming*- As with residential and commercial development, farm lands, particularly those in Mexico near the international border, continue to occupy areas that have historically contained suitable habitat for wildlife species. Wildlife, including listed threatened and endangered species, will continue to be displaced from their habitat.
- *Livestock Grazing* – Lands within Organ Pipe Cactus NM have historically been grazed. Surrounding lands in Mexico and BLM land north of the Organ Pipe Cactus NM are still being grazed. Although some lands have recovered, the monument continues to experience some trespass livestock grazing from adjacent lands. Grazing contributes to loss and degradation of habitat; competition with wildlife for forage and water; and may transmit disease to wildlife.
- *Illegal Woodcutting* - Intrusion of local U.S. and Mexico residents to harvest wood from trees and historic structures affects wildlife and affects the integrity of historic ranches on monument lands.
- *Mining* – Lands within and surrounding Organ Pipe Cactus National Monument have historically been mined. Several abandoned mines exist within the monument and on surrounding lands. Wildlife may fall in mines, causing injury or death. The monument plans to continue filling approximately 30 small, abandoned mines.

- *Undocumented Aliens (UDA)/ Law Enforcement Activities* – Undocumented migrants continue to use Organ Pipe Cactus National Monument and surrounding lands as routes for illegal entry into the United States. Deportable migrant apprehensions by Border Patrol agents in the Ajo Station increased steadily from approximately 9,000 in 1996 to 20,000 in 2000. In 2001, estimates of undocumented migrant traffic reached 1,000 per night in Organ Pipe Cactus NM alone. Illegal border-related activities and Border Patrol response have resulted in widespread habitat degradation and increased human presence in remote areas.

Page 79, Impacts of Alternative B: The Preferred Alternative, Mammals, *Sonoran Pronghorn*
7th paragraph:

Remove:

~~A detailed analysis of the expected effects of this project on threatened or endangered species is the subject of a separate biological assessment (NPS 2003c), which states that the implementation of this project may affect, but is not likely to adversely affect, the Sonoran pronghorn or its habitat due to construction activities."~~

Add:

During the consultation process with the USFWS, the NPS changed their determination of effect from *May affect, not likely to adversely affect* to *May affect, likely to adversely affect*. Although short-term construction-related impacts may be localized and in the range of negligible to minor, NPS will continue to consult with USFWS and implement conservation **recommendations measures** to ensure that no added impacts occur as the result of this project.

Page 82, Cumulative Impacts to Threatened, Endangered, and Sensitive Species:

Remove:

~~Future USBP plans in the area (see page 51) could result in adverse, short term, negligible impacts due to construction. However, impacts due to increased protection of resources would result in beneficial, long term, negligible impacts. Under alternative B overall impacts on threatened, endangered, or sensitive species would be beneficial, long term, minor to moderate. When combined with reasonably foreseeable future actions, cumulative impacts would be beneficial, long term, and moderate.~~

Add:

Sonoran Pronghorn

Past actions, such as grazing, and the past and continuing presence of human settlements and activity areas, recreation, and illegal vehicle use and law enforcement pursuit, foot traffic, grazing, and woodcutting, when combined have an adverse cumulative effect on the pronghorn and their habitat. Future USBP plans in the area (see page 51) could result in adverse, short-term, negligible impacts due to construction. However, impacts due to increased protection of resources would result in beneficial, long-term, negligible impacts.

As described in the Affected Environment, the proposed action would occur in an area that pronghorn are unlikely to approach. Therefore, the area to be impacted by this project is very unlikely to be used by Sonoran pronghorn as habitat. When the impacts of the past, present, and

reasonably foreseeable future actions are considered together with the proposed action, the cumulative impacts would be long-term, adverse, and of negligible to minor intensity.

Lesser-Long Nosed Bat

Past and present actions, such as grazing, the presence of human settlements and activity areas, recreation, and illegal vehicle use and law enforcement pursuit, illegal foot traffic, grazing, and woodcutting, may cumulatively result in small-scale loss or degradation of potential lesser long-nosed bat foraging habitat, and potential disturbance of roosts. However, no known or suspected roost sites of this endangered bat would be directly or indirectly impacted by the proposed action. Disturbance of 70 acres of habitat in the project area is estimated to affect approximately 0.04% of the available foraging habitat in the monument. Future USPB plans in the area (see page 51) could result in adverse, short-term, negligible impacts due to construction. However, impacts due to increased protection of resources would result in beneficial, long-term, negligible impacts.

The proposed project is likely to facilitate the restoration and recovery of lesser long-nosed bat habitat that has been damaged by illegal off-road driving. Of the illegal roads that exist in the monument, the eastern 2/3 are in desertscrub habitat with abundant forage plants (saguaro and organ pipe cactus). In addition to this habitat restoration, the proposed project will prevent future habitat degradation of this type. Therefore, the proposed action, when combined with these past, present, and reasonably foreseeable future actions, would likely contribute a negligible amount of long-term, localized, beneficial effects to the cumulative scenario.

Cactus Ferruginous Pygmy Owl

Past actions, such as grazing, and the past and continuing presence of human settlements and activity areas, recreation, and illegal vehicle use and law enforcement pursuit, foot traffic, grazing, and woodcutting, when combined have a negligible, adverse cumulative effect on the owl and its habitat. Future USPB plans in the area (see page 51) could result in adverse, short-term, negligible impacts due to construction. However, impacts due to increased protection of resources would result in beneficial, long-term, negligible impacts. The ever increasing number of illegal border crossings by undocumented immigrants and smugglers, and associated illegal activities result in damage to habitat and potentially disturbance of pygmy-owls. Cutting of firewood can remove potential nest trees, and illegal campfires result in an increased risk of wildfire.

The proposed action will result in some habitat loss and modification, including loss of less than 0.1 percent of proposed critical habitat, short-term noise disturbance and human activity associated with construction, and long-term noise disturbance and human activity from patrolling and some maintenance of the barrier. The proposed project is likely to facilitate the restoration and recovery of pygmy-owl habitat on the monument that has been damaged by illegal off-road driving. The decrease in impacts from illegal vehicle use off roads, and improvement of these areas both in habitat quality and decrease in human disturbance will likely benefit the pygmy-owl. Therefore, the proposed action, when combined with these past, present, and reasonably foreseeable future actions, would likely contribute a negligible amount of long-term, localized, beneficial effects to the cumulative scenario.

RESPONSES TO COMMENTS

Public comments were carefully reviewed for substantive comments. Substantive comments are those that challenge the accuracy of analysis; dispute information accuracy; suggest different viable alternatives; or provide new information that makes a change in the proposal. Of the public comments received on the EA, the following comments have been determined to be substantive. A response to the comment follows.

Comment: The definitions of Quitobaquito and Aguajita Springs are misleading and not adequate. Quitobaquito's riparian vegetation zone extends around the springs some distance, and across the international border into Mexican land, as does Aguajita Springs. The NPS should negotiate an agreement with the Mexican government to build the barrier on the Mexican side of the border near these critical sites.

Response: To be effective, the NPS must build and maintain the vehicle barrier on NPS land within the United States. Not all vegetation can be avoided, whether the barrier is constructed in Mexico or the United States. However, the EA provides mitigation measures that will be taken to minimize the impacts to riparian vegetation and avoid Quitobaquito and Aguajita Springs. Please see Page 31, *Mitigating Measures specific to Organ Pipe Cactus National Monument*, in the environmental assessment.

Comment: You should consider and use boulders of geologically appropriate materials at sensitive areas, such as Quitobaquito and Aguajita Springs. I don't think you have analyzed this alternative nearly enough. It should be possible to anchor boulders to bedrock or sunken pylons.

Response: The NPS considered this option provided through public scoping (see page 41, *Alternatives Considered but Dismissed*). The NPS has attempted to control illegal vehicle traffic with boulders at Organ Pipe Cactus NM in the past. The boulders were moved with heavy vehicles and were proven ineffective as a long-term solution. Lining the 30-mile border at Organ Pipe Cactus NM and 1 mile at Coronado NM would require locating boulders of a suitable size and transporting them to the site. Acquisition, transport, and anchoring of boulders to bedrock would be extremely time consuming and cost prohibitive; therefore, the alternative was dismissed from further consideration.

Comment: You dismiss discussing unique or prime farmlands because they do not exist. The agricultural lands around Quitobaquito seem to be quite unique and important. Quitobaquito should be eligible for the National Register as a "Traditional Cultural Property." I don't see any discussion of coordinating this proposed project with the SHPO.

Response: According to the Natural Resource Conservation Service, the lands within Organ Pipe Cactus National Monument are not considered prime and unique farmlands (W. Chen, pers. comm.). Quitobaquito Well and Springs are considered eligible as a traditional cultural property. An assessment of effect has been prepared in conjunction with this environmental assessment, and the Arizona State Historic Preservation Office (AZ SHPO) concurred with the findings and suggested mitigation measures provided in the environmental assessment. Please refer to page 24-25 of the environmental assessment, and additional mitigation measures contained in this errata sheet.

Comment: The National Park Service, not an employee of the construction company, should provide a cultural resource specialist to monitor the site during construction. This individual should monitor all construction activities.

Response: A National Park Service cultural resource specialist will be on site to monitor construction activities to ensure that mitigation measures outlined in the EA are met.

Comment: Why won't drug dealers simply arrange a meeting place along the border so that a legal US vehicle simply transfers drugs left there into the US? How frequently are drug smuggling vehicles apprehended in the park registered in the US?

Response: Rendezvous locations within the monument do and may continue to occur. Many vehicles that are apprehended, whether from Mexico or the United States, contain U.S. license plates that have been stolen.

Comment: The EA says that government vehicles cannot legally chase a vehicle into a designated wilderness area. Is that really true? Wilderness conditions should be restored.

Response: Park law enforcement vehicles typically do not drive into wilderness. However, with the

escalating crime that has been occurring at border parks, compounded with the murder of Ranger Eggle, NPS park staff determined that illegal traffic needed to be addressed and wrote a policy to apply to “hot pursuit” into wilderness. Many high speed chases involve vehicles originating in either Mexico or the U.S., trying to cross into Mexico. The presence of a vehicle barrier will reduce the amount of high speed chases and potential pursuit of vehicles crossing the border.

Comment: As important as creating a barrier will be, it is clearly insufficient. You need more enforcers as well as barriers. The NPS should hire or contract with the Tohono O’odham for a crew of Shadow Wolves [to help patrol the border].

Response: The proposed vehicle barrier will not preclude the use of additional enforcement in the future. However, the presence of the barrier will enable existing law enforcement officers to concentrate on illegal activities that may occur within the monument lands, and significantly reduce the number of high speed chases across the U.S./Mexico border.

Comment: The document states that the purpose of this barrier is to 1) to protect the fragile desert environments at both park units from adverse effects caused by illegal drug smuggling by vehicle across the international border, and 2) to protect the health and safety of visitors and federal employees. It further states, “A vehicle barrier will reduce the amount of illegal vehicle traffic and the creation of illegal roads, which have increased by 130 miles in the last 2 years at Organ Pipe Cactus.” However, no evidence is offered anywhere in this document that, by preventing vehicles from crossing the US – Mexico border illegally in OPCNM, this will in fact stop the creation of illegal roads.

Response: As reiterated in a previous comment, the purpose of the vehicle barrier is to protect park resources at both parks from adverse effects caused by illegal drug smuggling by vehicle across the international border. Although the NPS believes that the vehicle barrier will significantly reduce illegal off-road traffic to and from Mexico, the NPS has never claimed that the purpose of the proposed action will be to stop the creation of illegal roads. The NPS will follow the USFWS recommendations to rehabilitate areas that have been impacted by illegal traffic, particularly by transplanting large cacti from construction zones (such as saguaros and organ pipe) and therefore diminishing the effectiveness of established off-road trails. This will not only help restore these impacted areas and the habitat they provide for threatened and endangered species, but will make illegal vehicular use that originates within the monument’s backcountry more difficult. The NPS and the U.S. Border Patrol will also mutually develop a comprehensive plan to manage human activity in backcountry areas associated with illegal traffic and law enforcement activities. The plan will include management actions specific to all listed species that occur in the monument, and will contain measures to minimize noise and human activities.

Comment: The Draft Programmatic Environmental Impact Statement for U.S. Border Patrol Activities within the Border Areas of the Tucson and Yuma Sectors, Arizona (INS 2002) outlines no less than five major infrastructure projects that will impact OPCNM, one of which is a vehicle barrier similar, if not identical, to the one proposed in the EA. In light of Border Patrol’s plans, as well as the failure of the NPS to provide any evidence that this action will adequately address the impacts it is meant to address, this proposed action is wholly unnecessary.

Response: The Draft Programmatic Environmental Impact Statement for U.S. Border Patrol Activities within the Border Areas of the Tucson and Yuma Sectors, Arizona, is a programmatic document that proposes a number of projects that will help prevent the illegal entry of undocumented aliens into the United States. This document does propose a vehicle barrier as a future project; however, the Border Patrol has not identified any specific timeline or funding to complete the proposal. In light of the increasing impacts occurring in the park and the recent fatal shooting of a NPS law enforcement ranger who was pursuing drug smugglers entering the United States from Mexico, the NPS feels that it must take immediate steps to ensure visitor and employee safety, while protecting park resources. The NPS cannot provide actual evidence that the proposed

action will adequately address the impacts because evidence cannot be obtained unless the action is implemented. A thorough analysis of all reasonable alternatives, including the proposed action, was conducted in accordance with the National Environmental Policy Act prior to forming a final decision.

Comment: While there is some discussion of future activities proposed by the Border Patrol in their Draft Programmatic Environmental Impact Statement, there has been no meaningful analysis of the cumulative impacts these and all other past, present, and future Border Patrol projects will have on the wildlife dependant on the border region for survival. Furthermore, there is virtually no discussion or analysis of the cumulative impacts of all actions in the area, regardless of who undertakes the action.

Response: The Council of Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act, define the cumulative impact as "The impact on the environment which results on the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." The CEQ's guidance limits cumulative impact analysis to "important issues of national, regional, or local significance" (CEQ 1997). Therefore, this section does not address cumulative impacts to all resources for all alternatives; only resources and alternatives with potentially significant cumulative impacts are discussed. The NPS, in its best judgment, has identified other past, present, and foreseeable future projects that are pertinent to the discussion and contribute to a useful analysis of the cumulative result in combination with the proposed action. The NPS has not identified all actions in the area, because the NPS feels that not every action that takes place in the park and surrounding region is relevant to the analysis or contributes more than a negligible (i.e., less than minor) incremental impact on the cumulative scenario. The NPS has formally listed a number of actions that may have a cumulative effect when combined with this proposal. Please see the errata sheets.

Comment: This EA briefly mentions impacts of proposed Border Patrol projects in each of the many 'Cumulative Impacts' sections found throughout the document, yet provides no true analysis of these impacts. It also fails to mention, much less analyze, all other past, present or reasonably foreseeable future activities by any other agency other than Border Patrol. Cumulative effects analysis must include consideration of all actions, 'regardless of what agency or person' undertakes such action. Therefore, a proper analysis will have addressed a wide variety of activities affecting the environment and not just those of one agency, including, but not limited to, past and present mining, domestic livestock grazing, road construction and improvements, and Joint Task Force-6 activities.

Response: The cumulative effects analysis is revised to reflect some actions that have been mentioned in the text that may have a cumulative effect on the environment. Some of those actions include past erosion processes (page 55), past livestock grazing (page 55), and the Border Patrol road (page 56, 58). Please see the errata sheets for actions that were added to the cumulative scenario.

Comment: There is only brief mention of the potential impact this project might have on lands adjacent to OPCNM by rerouting vehicular traffic from the action area to these adjacent lands, but the impact is deemed 'negligible' (NPS 2003, p. 100) without any explanation as to how this conclusion was reached.

Response: The NPS believes that impacts to adjacent lands have been reasonably addressed given the lack of data available to assess potential impacts. It is impossible to predict the amount of traffic that may be rerouted through adjacent lands. Please see the discussion of potential impacts to adjacent lands on pages 96-100 of the environmental assessment.

Comment: Finally, there is no discussion whatsoever regarding the proposed primary and secondary pedestrian barriers to be built along a significant portion of the Arizona – Mexico border outside of OPCNM and Coronado National Memorial which will potentially aggravate the foot traffic in the action areas by rerouting foot traffic from other areas into the action areas, where presumably there will only be vehicle barriers that, by NPS’s own admission, will not deter foot traffic.

Response: The purpose of and need for the proposed action is to prevent illegal vehicular traffic across the U.S. – Mexico Border. The vehicle barrier will not be designed to prevent pedestrians or wildlife from crossing it. The Border Patrol has proposed a number of projects to help deter illegal foot traffic. As stated on page 11 of the subject EA, the most feasible project related to addressing illegal entry by foot is a pedestrian barrier extending one mile east and west from the port of entry at Lukeville, Arizona. The CEQ regulations that implement NEPA require an examination of relevant past, present, and foreseeable future actions having the potential for a cumulative impact on the environment. Any projects mentioned in other documents that are not addressed in this EA were deemed beyond the foreseeable future and were not included in the cumulative scenario.

Comment: ...by limiting consideration to only one alternative other than the “No Action” alternative, the NPS is apparently attempting to rubberstamp the agency’s predetermined course of action for this proposal. There is no attempt to conduct an analysis of other alternatives beyond briefly mentioning and dismissing them as insufficient to meet the purpose and need of this project.

Response: The NPS disagrees. A total of six alternatives were carefully considered in the EA by evaluating them against the purpose of and need for the project. If the alternatives did not meet the purpose of and need for the project or were deemed unreasonable due to cost, infeasibility, etc., then they were no longer carried forth for analysis. A list of four alternatives considered but dismissed from further consideration, along with reasons for their dismissal, is found on page 41 of the EA.

Comment: The draft EA states that this action will disturb approximately 70 acres of habitat, but that this will have no adverse effect on the pronghorn and may in fact have a beneficial effect on the species. Considering its critically endangered status, and that fragmentation and destruction of habitat is a significant factor in its decline, it is hard to understand how losing any additional habitat will not have an adverse impact on this species.

Response: The EA states that “The proposed project will disturb approximately 70 acres of habitat, almost half of which exists east of Arizona 85, where it is highly unlikely that Sonoran pronghorn will occur (either in the United States or Mexico). All acreage that will be affected is immediately adjacent to the international boundary and Mexico Highway 2. This acreage is very small in the regional context of the approximately 2 million acres of potentially suitable habitat available to the U.S. pronghorn population.” As stated under mitigation measures on page 31 of the EA, a revegetation plan will be implemented to minimize damage to habitat, helping to ensure that this area is only disturbed and habitat is not lost. This and other data contained in the analysis is the rationale that the NPS used to determine that the proposed action will have short-term, adverse impacts of negligible to minor intensity on the Sonoran pronghorn. Because these impacts are construction-related and therefore short-term, long-term impacts to the pronghorn will be beneficial because the barrier will reduce illegal vehicular use in the monument’s backcountry. For more information on the Sonoran pronghorn, please reference page 79-80 for the analysis and the biological assessment prepared as part of the EA.

Comment: “...the NPS has failed to provide evidence that this proposed action will address the creation or use of illegal roads, because it will do nothing to address these impacts caused by vehicles and people who are already in this country and/or are engaging in activities other than illegal cross-border related activities.”

Response: As stated in the Purpose and Need chapter of the EA, the purpose of the vehicle barrier is to prevent vehicles from illegally entering the United States from Mexico, where U.S. federal authorities have no jurisdiction. However, the NPS and other federal agencies *do* have jurisdiction over U.S. federal lands and have identified the following strategies for reducing the amount of illegal vehicular activity that occurs or originates within the national monument.

The U.S. Border Patrol has placed ground sensors at strategic locations along the international border and on established roads or trails within known travel corridors in order to detect illegal activities that occur within the United States. Because these sensors are capable of detecting ground vibrations and vehicles, they help law enforcement personnel improve apprehension efficiency from within the United States. Therefore, sensors will immediately alert agents to illegal vehicular use originating within the U.S. (such as smugglers driving through the backcountry to retrieve drugs left at the border), thus increasing the odds of apprehension and reducing the amount of off-road illegal vehicular use within the national monument. The use of sensors also reduces the number of agents needed to patrol an area, which in turn reduces the amount of vehicular patrol traffic.

In addition, the NPS will follow the USFWS's recommendations to rehabilitate areas that have been impacted by illegal traffic, particularly by transplanting large cacti from construction zones (such as saguaros and organ pipe) and therefore diminishing the effectiveness of established off-road trails. This will not only help restore these impacted areas and the habitat they provide for threatened and endangered species, but will make illegal vehicular use that originates within the monument's backcountry more difficult.

The NPS and the U.S. Border Patrol will also mutually develop a comprehensive plan to manage human activity in backcountry areas associated with illegal traffic and law enforcement activities. The plan will include management actions specific to all listed species that occur in the monument, and will contain measures to minimize noise and human activities.